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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER
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Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/776,944	LAU, PUI LUN
	Examiner	Art Unit	
	Michael D. Meucci	2142	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 January 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-44* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-44* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *12 July 2001* is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1.   This action is in response to the request for reconsideration file 18 January 2006.

2.   Claims 1-44 remain pending in the application.

Priority

3.   As per the Petition Decision on 25 July 2001, this application has been accorded a priority date of 31 October 2000 and the USPTO records show the effective filing date as such.

Miscellaneous

4.   The applicant correctly assumed that claim 44 is rejected under 35 U.S.C. 102 along with the other claims set forth in paragraph 5 of the previous office action. This has been noted below in the rejection.

Claim Rejections - 35 USC § 102

5.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6.   Claims 1, 13, 16-18, 20, 30, and 44 rejected under 35 U.S.C. 102(e) as being

anticipated by Bader et al. (U.S. 6,112,249) hereinafter referred to as Bader.

        a.   As per Claim 1, Bader teaches a network comprising a primary network

controller (lines 63-65 of column 7); a plurality of network devices wherein each network

device is connected to the primary network controller by a respective primary network

path (lines 47-48 of column 7 and block 20 of FIG. 3); at least one predetermined

primary backup network path connecting each network device with the primary network

controller, wherein each predetermined primary backup network path is blocked by the

network controller when a corresponding primary network path is active (lines 50-57 of

column 7); and wherein, when a primary network path between a network device and

the primary network controller fails, the primary network controller blocks the failed

primary network path and switches to one of the predetermined primary backup network

paths (lines 50-57 of column 7 and blocks 22, 24, and 26 of FIG. 3).

        b.   As per Claim 13, Bader teaches the primary network controller comprising

a computer. "The network controller periodically checks the status of the primary

network communications path, to determine if that path has been reactivated," (lines 5-8

of column 8). It is inherent that the network controller is a computer in the system

disclosed by Bader.

        c.   As per Claim 16, Bader teaches at least some of the network devices

comprise universal relays, (lines 32-44 of column 7)

        d.   As per Claim 17, Bader teaches at least some of the network devices

comprise process controllers, (lines 21-26 of column 5).

e.   As per Claim 18, Bader teaches a control and data acquisition system comprising the network of Claim 1, (lines 32-44 of column 7).

f.   As per Claim 20, Bader teaches teaches at least one network controller (lines 63-65 of column 7); a plurality of universal relays (lines 32-44 of column 7); a plurality of process controllers, (lines 21-26 of column 5); each network device (universal relay and process controllers) is connected to the primary network controller by a respective primary network path (lines 47-48 of column 7 and block 20 of FIG. 3); at least one predetermined primary backup network path connecting each network device with the primary network controller, wherein each predetermined primary backup network path is blocked by the network controller when a corresponding primary network path is active (lines 50-57 of column 7); and wherein, when a primary network path between a network device and the primary network controller fails, the primary network controller blocks the failed primary network path and switches to one of the predetermined primary backup network paths (lines 50-57 of column 7 and blocks 22, 24, and 26 of FIG. 3).

g.   As per Claim 30, Bader teaches the primary network controller comprising a computer. "The network controller periodically checks the status of the primary network communications path, to determine if that path has been reactivated," (lines 5-8 of column 8). It is inherent that the network controller is a computer in the system disclosed by Bader.

h.   As per claim 44, Bader teaches: the primary network controller blocking the failed primary network path includes disabling a port on a bridging device on the

primary network path. Although Bader does not explicitly disclose disabling a port,

removing the primary network communications path as an option in the database (lines

3-5 of column 8 and lines 10-56 of column 12) *inherently* disables the port.

Claim Rejections - 35 USC § 103

7.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

a.   Claim 2 rejected under 35 U.S.C. 103(a) as being unpatentable over

Bader as applied to claim 1 above in view of Bass (U.S. 3,920,975).

Bader does not explicitly teach the primary network controller periodically testing

a condition of the predetermined backup network paths to determine if the

predetermined backup network paths are operational, such testing being performed by

the primary network controller disabling the primary network path. However, Bass

discloses: "The remote test and control system of the invention provides remote testing

and switching capability for a data communications network having primary and backup

facilities through a network controller," (lines 30-33 of column 3), and "The network

controller 34 includes equipment for applying test signals to the data communications

network and for measuring the results thereof. The network controller 34 further

includes equipment for applying command signals to the data communications network

to effect switching changes at the remote data terminal stations 12 and 26 as well as

intermediate station 24. These command signals are applied to the network not only to reconfigure it for operating purposes by switching over to backup facilities, but also to place the different network elements into various test modes," (lines 5-16 of column 6). One of ordinary skill in the art at the time of the applicant's invention would have clearly recognized that it is quite advantageous for the network controller in Bader to periodically test a condition of the backup network paths. "A network controller located at a central location which contains standard test equipment for generating and analyzing the test signals that are applied to the network for troubleshooting as well as generating and transmitting to the individual network remote data terminal stations command signals for effectuating switching changes threat to reconfigure the network by switching between primary and backup facilities and also establish various test modes," (lines 33-42 of column 2). It is for this reason that one of ordinary skill in the art at the time of the applicant's invention would have been motivated to have the network controller periodically test a condition of the backup network paths in the system as taught by Bader.

b.   Claim 3 rejected under 35 U.S.C. 103(a) as being unpatentable over Bader as applied to claim 1 above in view of Tomioka (U.S. 5,452,115).

Bader does not explicitly teach: "a secondary network controller that takes over control of the network if the primary network controller fails, wherein each network device is connected to the secondary network controller by a respective secondary network path; at least one predetermined secondary backup network path connecting each network device with the secondary network controller, wherein each

predetermined secondary backup network path is blocked by the network controller

when a corresponding secondary network path is active; and wherein, when a

secondary network path between a network device and the secondary network

controller fails, the secondary network controller blocks the inoperable secondary

network path and switches to one of the predetermined secondary backup network

paths." However Tomioka discloses: "If, as shown in FIG. 21, there is provided a

backup network controller 9, switching may be made to the backup network controller

9," (lines 51-53 of column 16). One of ordinary skill in the art at the time of the

applicant's invention would have clearly recognized that it is quite advantageous for the

network of Bader to comprise a secondary network controller as described in the

system of Tomioka having the characteristics of the primary network controller as

described in Bader. Likewise, it would be obvious to one of ordinary skill in the art at

the time of the applicant's invention that the respective secondary network paths would

be complimentary to the primary network paths. Likewise, the secondary backup

network paths would be complimentary to the primary backup network paths disclosed

in Bader (see claim 1 rejection above). "The monitor station should preferably be

authorized to stop the network controller when the fault of the controller is so severe

that immediate recovery is difficult," (lines 48-51 of column 16 in Tomioka). It is for this

reason that one of ordinary skill in the art at the time of the applicant's invention would

have been motivated to comprise the system with a secondary network controller

having respective secondary network paths, at least one secondary backup network

path connecting each network device to the secondary network controller having a

secondary network path that is blocked by the network controller when a corresponding

secondary network path is active, and having the secondary network controller block the

inoperable path and switch to a secondary backup path in the system as taught by

Bader.

      c.   Claim 4 rejected under 35 U.S.C. 103(a) as being unpatentable over

Bader and Tomioka as applied to claim 3 above, and further in view of Bass.

      Bader does not explicitly teach the secondary network controller periodically

testing a condition of the predetermined secondary backup network paths. However,

Bass discloses: "The remote test and control system of the invention provides remote

testing and switching capability for a data communications network having primary and

backup facilities through a network controller," (lines 30-33 of column 3). One of

ordinary skill in the art at the time of the applicant's invention would have clearly

recognized that it is quite advantageous for the network controller in Bader to

periodically test a condition of the secondary backup network paths. "A network

controller located at a central location which contains standard test equipment for

generating and analyzing the test signals that are applied to the network for

troubleshooting as well as generating and transmitting to the individual network remote

data terminal stations command signals for effectuating switching changes thereat to

reconfigure the network by switching between primary and backup facilities and also

establish various test modes," (lines 33-42 of column 2). It is for this reason that one of

ordinary skill in the art at the time of the applicant's invention would have been

motivated to have the network controller periodically test a condition of the secondary backup network paths in the system as taught by Bader.

d.   Claims 5-7 rejected under 35 U.S.C. 103(a) as being unpatentable over Bader as applied to claim 1 above in view of Law et al. (U.S. 6,373,838 B1) hereinafter referred to as Law.

Bader does not explicitly teach primary network paths and primary backup network paths comprising a 10-megabit per second connection; an Ethernet 10Base-T connection; and twisted-pair cable, fiber optic cable, and/or coaxial cable. However, Law discloses: "In one implementation, the network access servers in NAS stack are Cisco Model No. AS5300 network access systems that each support multiple PRI (T1/E1) lines, a 100BaseT full duplex Ethernet, and a 10BaseT Ethernet," (lines 59-62 of column 3) and "The egress ports are typically implemented in high speed LAN or WAN interfaces such as 100BaseT, ATM or Optical Fiber," (lines 19-21 of column 5). One of ordinary skill in the art at the time of the applicant's invention would have clearly recognized that it is quite advantageous for the network paths to comprise a 10-megabit per second connection, an Ethernet 10Base-T connection, and twisted-pair cable, fiber optic cable, and/or coaxial cable. "The primary and secondary interconnects and each consist of many high speed ports compatible with the interfaces of other components in DASA," (lines 23-26 of column 5 in Law. It is for this reason that one of ordinary skill in the art at the time of the applicant's invention would have been motivated to comprise the network paths of a 10 megabit per second connection; an

Ethernet 10Base-T connection; and twisted-pair cable, fiber optic cable, and/or coaxial cable in the system as taught by Bader.

e.   Claim 8 rejected under 35 U.S.C. 103(a) as being unpatentable over Bader in view of Law as applied to claim 5 above, further in view of Selig et al. (U.S. 5,521,958) hereinafter referred to as Selig.

Bader does not explicitly teach the 10-megabit per second connection comprising a wireless connection. However, Selig discloses: "The first communication path is a wireless path," (Abstract); and "a mobile facility having an auxiliary wireless communication path with said portable communication and processing unit," (lines 1-3 of column 8). One of ordinary skill in the art at the time of the applicant's invention would have clearly recognized that it is quite advantageous for the 10-megabit per second connection to comprise a wireless connection. "A mobile facility communicates with the processor," (Abstract of Selig). It is for this reason that one of ordinary skill in the art at the time of the applicant's invention would have been motivated to comprise the 10-megabit per second connection of a wireless connection in the system as taught by Bader.

f.   Claims 9-11 rejected under 35 U.S.C. 103(a) as being unpatentable over Bader as applied to claim 1 above in view of Law.

Bader does not explicitly teach primary network paths and primary backup network paths comprising a 100-megabit per second connection; an Ethernet 100Base-T connection; and twisted-pair cable, fiber optic cable, and/or coaxial cable. However, Law discloses: "In one implementation, the network access servers in NAS stack are

Cisco Model No. AS5300 network access systems that each support multiple PRI (T1/E1) lines, a 100BaseT full duplex Ethernet, and a 10BaseT Ethernet," (lines 59-62 of column 3) and "The egress ports are typically implemented in high speed LAN or WAN interfaces such as 100BaseT, ATM or Optical Fiber," (lines 19-21 of column 5). One of ordinary skill in the art at the time of the applicant's invention would have clearly recognized that it is quite advantageous for the network paths to comprise a 100-megabit per second connection, an Ethernet 10Base-T connection, and twisted-pair cable, fiber optic cable, and/or coaxial cable. "The primary and secondary interconnects and each consist of many high speed ports compatible with the interfaces of other components in DASA," (lines 23-26 of column 5 in Law. It is for this reason that one of ordinary skill in the art at the time of the applicant's invention would have been motivated to comprise the network paths of a 100 megabit per second connection; an Ethernet 100Base-T connection; and twisted-pair cable, fiber optic cable, and/or coaxial cable in the system as taught by Bader.

g.   Claim 12 rejected under 35 U.S.C. 103(a) as being unpatentable over Bader in view of Law as applied to claim 9 above, further in view of Selig.

Bader does not explicitly teach the 100-megabit per second connection comprising a wireless connection. However, Selig discloses: "The first communication path is a wireless path," (Abstract); and "a mobile facility having an auxiliary wireless communication path with said portable communication and processing unit," (lines 1-3 of column 8). One of ordinary skill in the art at the time of the applicant's invention would have clearly recognized that it is quite advantageous for the 100-megabit per

second connection to comprise a wireless connection. "A mobile facility communicates with the processor," (Abstract of Selig). It is for this reason that one of ordinary skill in the art at the time of the applicant's invention would have been motivated to comprise the 100-megabit per second connection of a wireless connection in the system as taught by Bader.

      h.   Claims 14-15 rejected under 35 U.S.C. 103(a) as being unpatentable over Bader as applied to claim 1 above in view of Law.

      Bader does not explicitly teach the primary network paths and primary backup network paths comprising a plurality of network bridges. However, Law discloses: "The primary interconnect 18 is a Cisco Catalyst Model No. 5002 100BaseT Ethernet switch and the secondary interconnect 20 is a Cisco Model No. 7206 10BaseT Ethernet switch," (lines 63-66 of column 3). One of ordinary skill in the art at the time of the applicant's invention would have clearly recognized that it is quite advantageous for the primary network paths and primary backup network paths to comprise a plurality of network bridges. "Two or more switches can be connected together to increase the total number of ports available for connecting NAS's together," (lines 19-22 of column 4 in Law). It is for this reason that one of ordinary skill in the art at the time of the applicant's invention would have been motivated to comprise the primary network paths and primary backup network paths of a plurality of network bridges in the system as taught by Bader.

      i.   Claim 19 rejected under 35 U.S.C. 103(a) as being unpatentable over Bader as applied to claim 18 above, in view of Sanderson (U.S. 5,864,284).

Bader does not explicitly teach the primary network controller monitoring the

status of an electrical power grid through the network. However, Sanderson discloses:

"In addition the data communication system of the present invention may serve as part

of a control and monitoring system for a power network or power grid," (lines 46-49 of

column 3). One of ordinary skill in the art at the time of the applicant's invention would

have clearly recognized that it is quite advantageous for the primary network controller

to monitor the status of an electrical power grid through the network. "The system for

providing data communication service to the customer premise as shown in FIG. 1 may

be modified to provide station-to-station communications for internal use of a power

company," (lines 43-46 of column 3 in Sanderson). It is for this reason that one of

ordinary skill in the art at the time of the applicant's invention would have been

motivated to have the primary network controller monitor the status of an electrical

power grid through the network in the system as taught by Bader.

j.   Claim 21 rejected under 35 U.S.C. 103(a) as being unpatentable over

Bader as applied to claim 20 above in view of Bass.

Bader does not explicitly teach the primary network controller periodically testing

a condition of the predetermined backup network paths. However, Bass discloses: "The

remote test and control system of the invention provides remote testing and switching

capability for a data communications network having primary and backup facilities

through a network controller," (lines 30-33 of column 3). One of ordinary skill in the art

at the time of the applicant's invention would have clearly recognized that it is quite

advantageous for the network controller in Bader to periodically test a condition of the

backup network paths. "A network controller located at a central location which

contains standard test equipment for generating and analyzing the test signals that are

applied to the network for troubleshooting as well as generating and transmitting to the

individual network remote data terminal stations command signals for effectuating

switching changes thereat to reconfigure the network by switching between primary and

backup facilities and also establish various test modes," (lines 33-42 of column 2). It is

for this reason that one of ordinary skill in the art at the time of the applicant's invention

would have been motivated to have the network controller periodically test a condition of

the backup network paths in the system as taught by Bader.

     k.   Claim 22-24 rejected under 35 U.S.C. 103(a) as being unpatentable over

Bader as applied to claim 20 above in view of Law.

     Bader does not explicitly teach primary network paths and primary backup

network paths comprising a 10-megabit per second connection; an Ethernet 10Base-T

connection; and twisted-pair cable, fiber optic cable, and/or coaxial cable. However,

Law discloses: "In one implementation, the network access servers in NAS stack are

Cisco Model No. AS5300 network access systems that each support multiple PRI

(T1/E1) lines, a 100BaseT full duplex Ethernet, and a 10BaseT Ethernet," (lines 59-62

of column 3) and "The egress ports are typically implemented in high speed LAN or

WAN interfaces such as 100BaseT, ATM or Optical Fiber," (lines 19-21 of column 5).

One of ordinary skill in the art at the time of the applicant's invention would have clearly

recognized that it is quite advantageous for the network paths to comprise a 10-

megabit per second connection, an Ethernet 10Base-T connection, and twisted-pair

cable, fiber optic cable, and/or coaxial cable. "The primary and secondary interconnects and each consist of many high speed ports compatible with the interfaces of other components in DASA," (lines 23-26 of column 5 in Law. It is for this reason that one of ordinary skill in the art at the time of the applicant's invention would have been motivated to comprise the network paths of a 10 megabit per second connection; an Ethernet 10Base-T connection; and twisted-pair cable, fiber optic cable, and/or coaxial cable in the system as taught by Bader.

l.   Claim 25 rejected under 35 U.S.C. 103(a) as being unpatentable over Bader in view of Law, as applied to claim 22 above, further in view of Selig.

Bader does not explicitly teach the 10-megabit per second connection comprising a wireless connection. However, Selig discloses: "The first communication path is a wireless path," (Abstract); and "a mobile facility having an auxiliary wireless communication path with said portable communication and processing unit," (lines 1-3 of column 8). One of ordinary skill in the art at the time of the applicant's invention would have clearly recognized that it is quite advantageous for the 10-megabit per second connection to comprise a wireless connection. "A mobile facility communicates with the processor," (Abstract of Selig). It is for this reason that one of ordinary skill in the art at the time of the applicant's invention would have been motivated to comprise the 10-megabit per second connection of a wireless connection in the system as taught by Bader.

m.   Claims 26-28 rejected under 35 U.S.C. 103(a) as being unpatentable over Bader as applied to claim 20 above in view of Law.

Bader does not explicitly teach primary network paths and primary backup network paths comprising a 100-megabit per second connection; an Ethernet 100Base-T connection; and twisted-pair cable, fiber optic cable, and/or coaxial cable. However, Law discloses: "In one implementation, the network access servers in NAS stack are Cisco Model No. AS5300 network access systems that each support multiple PRI (T1/E1) lines, a 100BaseT full duplex Ethernet, and a 10BaseT Ethernet," (lines 59-62 of column 3) and "The egress ports are typically implemented in high speed LAN or WAN interfaces such as 100BaseT, ATM or Optical Fiber," (lines 19-21 of column 5). One of ordinary skill in the art at the time of the applicant's invention would have clearly recognized that it is quite advantageous for the network paths to comprise a 100-megabit per second connection, an Ethernet 10Base-T connection, and twisted-pair cable, fiber optic cable, and/or coaxial cable. "The primary and secondary interconnects and each consist of many high speed ports compatible with the interfaces of other components in DASA," (lines 23-26 of column 5 in Law. It is for this reason that one of ordinary skill in the art at the time of the applicant's invention would have been motivated to comprise the network paths of a 100 megabit per second connection; an Ethernet 100Base-T connection; and twisted-pair cable, fiber optic cable, and/or coaxial cable in the system as taught by Bader.

n.   Claim 29 rejected under 35 U.S.C. 103(a) as being unpatentable over Bader in view of Law as applied to claim 26 above, further in view of Selig.

Bader does not explicitly teach the 100-megabit per second connection comprising a wireless connection. However, Selig discloses: "The first communication

path is a wireless path," (Abstract); and "a mobile facility having an auxiliary wireless

communication path with said portable communication and processing unit," (lines 1-3

of column 8). One of ordinary skill in the art at the time of the applicant's invention

would have clearly recognized that it is quite advantageous for the 100-megabit per

second connection to comprise a wireless connection. "A mobile facility communicates

with the processor," (Abstract of Selig). It is for this reason that one of ordinary skill in

the art at the time of the applicant's invention would have been motivated to comprise

the 100-megabit per second connection of a wireless connection in the system as

taught by Bader.

o.   Claim 31-32 rejected under 35 U.S.C. 103(a) as being unpatentable over

Bader as applied to claim 20 above in view of Law.

Bader does not explicitly teach the primary network paths and primary backup

network paths comprising a plurality of network bridges. However, Law discloses: "The

primary interconnect 18 is a Cisco Catalyst Model No. 5002 100BaseT Ethernet switch

and the secondary interconnect 20 is a Cisco Model No. 7206 10BaseT Ethernet

switch," (lines 63-66 of column 3). One of ordinary skill in the art at the time of the

applicant's invention would have clearly recognized that it is quite advantageous for the

primary network paths and primary backup network paths to comprise a plurality of

network bridges. "Two or more switches can be connected together to increase the

total number of ports available for connecting NAS's together," (lines 19-22 of column 4

in Law). It is for this reason that one of ordinary skill in the art at the time of the

applicant's invention would have been motivated to comprise the primary network paths

and primary backup network paths of a plurality of network bridges in the system as taught by Bader.

p.   Claims 33-34 and 38-39 rejected under 35 U.S.C. 103(a) as being unpatentable over Bader in view of Bass.

Bader teaches a network comprising a primary network controller (lines 63-65 of column 7); a plurality of network devices wherein each network device is connected to the primary network controller by a respective primary network path (lines 47-48 of column 7 and block 20 of FIG. 3); at least one predetermined primary backup network path connecting each network device with the primary network controller, wherein each predetermined primary backup network path is blocked by the network controller when a corresponding primary network path is active (lines 45-57 of column 7); and wherein, when a primary network path between a network device and the primary network controller fails, the primary network controller blocks the failed primary network path and switches to one of the predetermined primary backup network paths (lines 50-57 of column 7 and blocks 22, 24, and 26 of FIG. 3).

Bader does not explicitly teach the step of monitoring the status of the primary network path. However, Bass discloses: "The remote test and control system of the invention provides remote testing and switching capability for a data communications network having primary and backup facilities through a network controller," (lines 30-33 of column 3). One of ordinary skill in the art at the time of the applicant's invention would have clearly recognized that it is quite advantageous for the network controller in Bader to periodically test a condition of the backup network paths. "A network controller

located at a central location which contains standard test equipment for generating and

analyzing the test signals that are applied to the network for troubleshooting as well as

generating and transmitting to the individual network remote data terminal stations

command signals for effectuating switching changes thereat to reconfigure the network

by switching between primary and backup facilities and also establish various test

modes," (lines 33-42 of column 2). It is for this reason that one of ordinary skill in the art

at the time of the applicant's invention would have been motivated to have the network

controller periodically test a condition of the backup network paths in the system as

taught by Bader.

       q.   Claims 35 and 40 rejected under 35 U.S.C. 103(a) as being unpatentable

over Bader in view of Bass as applied to claims 33 and 38 respectively above.

      Bader teaches at least some of the network devices comprise universal relays,

(lines 32-44 of column 7).

       r.   Claims 36 and 41 rejected under 35 U.S.C. 103(a) as being unpatentable

over Bader in view of Bass as applied to claims 33 and 38 respectively above.

      Bader teaches at least some of the network devices comprise a process

controller, (lines 21-26 of column 5).

       s.   Claims 37 and 42-43 rejected under 35 U.S.C. 103(a) as being

unpatentable over Bader in view of Bass, as applied to claims 33 and 38 respectively

above, in view of Law.

      Bader does not explicitly teach the primary network paths and primary backup

network paths comprising a plurality of network bridges. However, Law discloses: "The

primary interconnect 18 is a Cisco Catalyst Model No. 5002 100BaseT Ethernet switch

and the secondary interconnect 20 is a Cisco Model No. 7206 10BaseT Ethernet

switch," (lines 63-66 of column 3). One of ordinary skill in the art at the time of the

applicant's invention would have clearly recognized that it is quite advantageous for the

primary network paths and primary backup network paths to comprise a plurality of

network bridges. "Two or more switches can be connected together to increase the

total number of ports available for connecting NAS's together," (lines 19-22 of column 4

in Law). It is for this reason that one of ordinary skill in the art at the time of the

applicant's invention would have been motivated to comprise the primary network paths

and primary backup network paths of a plurality of network bridges in the system as

taught by Bader.

Response to Arguments

8.   Applicant's arguments filed 18 January 2006 have been fully considered but they

are not persuasive.

(A)   Regarding claims 1 and 20, applicant contends that Bader does not teach

the limitations: at least one predetermined primary backup network path connecting

each network device with the primary network controller, wherein each predetermined

primary backup network path is blocked by the network controller when a corresponding

primary network path is active; and wherein, when a primary network path between a

network device and the primary network controller fails, the primary network controller

blocks the failed primary network path and switches to one of the predetermined

primary backup network paths (first full paragraph on page 12 of Remarks). The

examiner respectfully disagrees.

As to point (A), the applicant believes that Bader does not "block" network paths

as recited in the claims. The examiner contends that the citations in Bader, in fact, do

perform the step of blocking as claimed in the instant application. "Block" as defined by

dictionary.com (www.dictionary.com) as a transitive verb states: To stop or impede the

passage of or movement through; obstruct: *block traffic.* Line 58 of column 7 through

line 10 of column 8 in Bader discloses: "Once the secondary network communications

path is activated, the network control hardware/software reinitiates on the secondary

network communications path (block 26) the communications sessions which were

ongoing on the primary network communications path at the time of the path failure.

Additionally, the network controller assigns any new communications sessions to the

secondary network communications path (block 28). **As will be recognized by those**

of skill in the art, such a reassignment may be implemented in any number of

ways, including setting the "cost" associated with the secondary

communications path to a level lower than the cost associated with the primary

network communications path or by removing the primary network

communications path as an option in the database of available paths. Once the

secondary path is activated, the network controller periodically checks the status

of the primary network communications path, to determine if that path has been

reactivated (block 30). Unless the primary path has been reactivated, the network

**control hardware/software continues to assign all new communications sessions
to the secondary network communications path.**" In summary, all existing

communication sessions and all new communication sessions are assigned to the

secondary network communications path, effectively *stopping traffic* through the primary

communication path. This is accomplished by removing the primary path as a

communication option (lines 3-5 of column 8 in Bader), or weighting the secondary path

such that no communication can be made over the primary path (line 67 of column 7

through line 3 of column 8 in Bader), each case forcibly blocking all communications on

the primary path. The examiner maintains the position of Bader teaching these claim

limitations as set forth in the previous non-final action.

9.   (B)   Regarding claim 44, the applicant asserts that Bader fails to teach a port.
The examiner respectfully disagrees.

As to point (B), the applicant argues that Bader is not seen to even disclose a

port in conjunction with Bader's disclosure relating to manipulation of the network paths.

The examiner points to Fig. 4 and accompanying description beginning on line 10 of

column 12 and ending on line 56 of column 12. In particular, the examiner points to

lines 30-38 of column 12 which disclose: "In the event of a failure at either network node

134 or network node 136 (or in the communications links connecting those network

nodes to the end nodes), the end nodes using the failed network node as a primary path

activate their secondary paths and resume their communications sessions through the

remaining active network node (although prior to activating the secondary paths, one or

more efforts to reactivate or "recover" the primary path may be attempted)." It is any

and all of these nodes, node 134, 136, or in the communication links connecting those

network nodes to the end nodes, that inherently contain the port in question. Although

not specifically disclosed, communication between the nodes, including "bridging"

nodes, is not possible without some type of communication port. As such, Bader has

clearly taught the limitations of claim 44 and the rejection remains proper.

10.   (C)   Regarding claims 33 and 38, the applicant asserts that Bader fails to teach

the claimed features relating to "each predetermined primary backup network path is

blocked by the network controller when a corresponding primary network path is active"

and "when a primary network path between a network device and the primary network

controller fails, the primary network controller blocks the failed primary network path and

switches to one of the predetermined primary backup network paths." The examiner

respectfully disagrees.

       As to point (C), the examiner points to lines 45-57 of column 7, particularly lines

46-57 which discloses: "As shown at block 20 of FIG. 3, and as discussed above,

typically all communications sessions are assigned to the primary network

communications path, as that path typically provides better performance and/or costs

less than any secondary network communications path. Upon a failure along the

primary communications path (block 22), the network control hardware/software

typically will attempt to reactivate the primary communications path one or more times

(not shown in FIG. 3). If these reactivation attempts are unsuccessful, the network

control hardware/software then may activate the secondary network communications

path (block 24)." This citation clearly teaches both of the argued limitations pertaining to

claims 33 and 38.

Conclusion

11.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.

12.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

Duckwall et al. (U.S. 6,954,787 B2) discloses the addition and removal of nodes

from a common interconnect.

Fredette et al. (U.S. 6,987,727 B2) discloses automatic protection switching

using link-level redundancy supporting multi-protocol label switching.

Kodialam et al. (U.S. 6,996,065 B2) discloses dynamic backup routing of network tunnel paths for local restoration in a packet network.

13.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Meucci at (571) 272-3892. The examiner can normally be reached on Monday-Friday from 9:00 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Caldwell, can be reached at (571) 272-3868. The fax phone number for this Group is 571-273-8300.
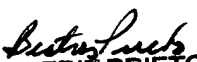
Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [michael.meucci@uspto.gov].

All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status

information for unpublished applications is available through Private PAIR only. For

more information about the PAIR system, see http://pair-direct.uspto.gov. Should you

have questions on access to the Private PAIR system, contact the Electronic Business

Center (EBC) at 866-217-9197 (toll-free).

BEATRIZ PRIETO
PRIMARY EXAMINER